

## DIFFUSION BARRIER LAYER FOR LEAD FREE PACKAGE SUBSTRATE

### Abstract of the Disclosure

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A ball grid array device includes an array of pads made of an electrically conductive material. The array of pads is positioned on the first major surface. At least one of the array of pads includes a diffusion retarding layer to retard the rate of diffusion of the electrically conductive material from the pad. The ball grid array  
10 device also includes a binding layer for binding the diffusion retarding layer to the conductive material of the at least one pad. The ball grid array device also includes a layer of material for receiving solder placed on the diffusion retarding layer.

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